Translation of selected passages from JP-B2-P3107909

Page 1, column 1,line 1 to page 2, column 3, line 34 (Claims):

(57)【Claims】

【Claim 1】 A particulate water-absorbing agent, comprising particles of the size of not larger than 149 μm in a ratio of less than 10 weight % and exhibiting a water absorption rate in the range of 20 to 90 seconds when absorbing 28 g of physiological saline per g of the water-absorbing agent, with the water-absorbing agent being characterized in that, when a steel ball of 15/32 inches (about 11.9 mm) in diameter (a steel ball according to JIS B-1501) is made to freely fall from the height of 20 cm onto a swollen hydrogel obtained in the above-mentioned way, the steel ball (about 11.9 mm) bounds from the swollen hydrogel or, after coming to stand still, does not enter the swollen hydrogel.

【Claim 2】 A water-absorbing agent according to claim 1, of which the particles are controlled to such that the ratio of particles of the size of not larger than 149 μm is less than 10 weight %, and that the ratio of particles of the size of 149 to 500 μm is not less than 50 weight %.

【Claim 3】 A water-absorbing agent according to claim 1 or 2, which is a granulated one.

【Claim 4】 A water-absorbing agent according to any one of claims 1 to 3, wherein the water absorption rate is in the range of 30 to 70 seconds.

【Claim 5】 A process for producing a water-absorbing agent, being characterized by comprising the steps of: adding an aqueous liquid containing 1 to 10 parts by weight of a polycationic compound to 100 parts by weight of crosslinked water-absorbent polymer particles; and then mixing them together; wherein the polycationic compound has a molecular weight of not less than 5,000 and contains at least one member selected from the group consisting of primary, secondary, and tertiary amino groups and their salts, and wherein the crosslinked water-absorbent polymer particles have an acid group and include particles of not larger than 149 μm in particle diameter in a ratio being in the range of 15 to 75 weight %.

【Claim 6】 A process according to claim 5, wherein the ratio of particles of not larger than 149 μm in particle diameter is in the range of 25 to 65 weight %.

【Claim 7】 A process according to claim 5 or 6, wherein the polymer particles having an acid group are crosslinked polymer particles of a partially neutralized poly(acrylate salt).

【Claim 8】 A process according to claim 7, wherein the crosslinked polymer particles of the partially neutralized poly(acrylate salt) are products obtained by aqueous solution polymerization.

【Claim 9】 A process according to any one of claims 5 to 9, wherein the polycationic compound is at least one member selected from the group consisting of polyalkylenepolyamines, denatured polyethylenimines, polyallylamines, polyvinylamines and polyether amines.

【Claim 10】 A process according to any one of claims 5 to 9, wherein the polycationic compound is a polyethylenimine.

【Claim 11】 A process according to any one of claims 5 to 10, wherein the molecular weight of the polycationic compound is in the range of 10,000 to 100,000.

【Claim 12】 A process according to any one of claims 5 to 11, wherein the water-absorbing agent obtained by the process comprising the steps of adding the polycationic compound to the crosslinked water-absorbent polymer particles and then mixing them together are those of which the particles are controlled to such that the ratio of particles of the size of not larger than 149 μ m is less than 10 weight %, and that the ratio of particles of the size of 149 to 500 μ m is not less than 50 weight %.

【Claim 13】 A process according to any one of claims 5 to 12, wherein the water-absorbing agent is a product obtained by being granulated.

【Claim 14】 A process according to any one of claims 5 to 13, wherein the concentration of the aqueous liquid of the polycationic compound is in the range of 10 to 90 weight %.

【Claim 15】 A water-absorbent structure, comprising a mixture of 55 to 95 parts by weight of the water-absorbing agent as recited in any one of claims 1 to 4 and 55 to 5 parts by weight of pulverized pulp.

【Claim 16】 A body-fluid-absorbent article, comprising the water-absorbent structure as recited in claim 15.